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The USENIX Association Newsletter

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The closing date for submissions for the next issue of *;login:* is January 3, 1989

USENIX **THE PROFESSIONAL AND TECHNICAL
UNIX® ASSOCIATION**

NOTICE

;login: is the official newsletter of the USENIX Association, and is sent free of charge to all members of the Association.

The USENIX Association is an organization of AT&T licensees, sub-licensees, and other persons formed for the purpose of exchanging information and ideas about UNIX[†] and similar operating systems and the C programming language. It is a non-profit corporation incorporated under the laws of the State of Delaware. The officers of the Association are:

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usenix!agn

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Contributions Solicited

Members of the UNIX community are encouraged to contribute articles to *;login:*. Contributions may be sent to the editors electronically at the addresses above or through the U.S. mail to the Association office. The USENIX Association reserves the right to edit submitted material.

;login: is produced on UNIX systems using *troff* and a variation of the –me macros. Contributions should be in *n/troff* input format, using any macro package.

UUNET Subscriptions

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Acknowledgments

The Association uses a SUN[‡] 3/180S running SUN OS for support of office and membership functions, preparation of *;login:*, and other Association activities. Connected to the SUN is a QMS Lasergrafix[*] 800 Printer System donated by Quality Micro Systems of Mobile, Alabama. It is used for general printing and draft production of *;login:* and *Computing Systems* with *ditroff* software provided by mt Xinu. The membership and mailing lists are maintained using Sybase.[#]

;login:

USENIX Winter Conference

Town & Country Hotel
San Diego, CA

January 30 - February 3, 1989

Tutorials

MONDAY, JANUARY 30

Introduction to 4.3BSD Internals

Thomas W. Doeppner, Jr., Brown University

You must be licensed for 4.2/3BSD source code, or licensed for either 32/V, System III or System V source code from AT&T in order to attend this tutorial.

Introduction to UNIX System V Internals

Steve Buroff, AT&T, & Curt Schimmeh, Key Computer Labs

An Introduction to C++

Robert Murray, AT&T Bell Laboratories

4BSD TCP/IP Performance Improvements[*]

Van Jacobson, Lawrence Berkeley Laboratory, & Mike Karels, University of California, Berkeley

UNIX System V Streams Module and Driver Design

Hari Pulijal & Stephen Rago, AT&T Bell Laboratories

Introduction to Programming the X Window System,[†] Version 11

Oliver Jones, Apollo Computer, Inc.

UNIX System V Remote File Sharing (RFS)

Michael Padovano & Michael Scheer, AT&T Bell Laboratories

The Andrew Toolkit (ATK): An Introduction

Andrew J. Palay & Nathaniel S. Borenstein, Carnegie-Mellon University

Open Systems Interconnection (OSI)[*]

Colin I'Anson, Hewlett-Packard

Managing a Network of NFS Systems

Ed Gould, mt Xinu

Security Issues in a Distributed UNIX Environment: The Kerberos Approach[*]

Dan Geer, Jennifer Steiner & Jon Rochlis, MIT

Using PostScript[‡] as "Yet Another" UNIX Tool[*]

Dick Dunn, Interactive Systems Corp.

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[*] This is the first time the USENIX Association has offered this tutorial.

[†] The X window System is a trademark of MIT.

[‡] PostScript is a trademark of Adobe Systems, Inc.

TUESDAY, JANUARY 31

Beyond 4.3BSD: Advanced Kernel Topics

Mike Karels & Marshall Kirk McKusick, University of California, Berkeley

Advanced UNIX System V Internals – A Code Walk Through

Steve Buroff, AT&T, & Curt Schimmel, Key Computer Labs

You must be licensed for UNIX System V.3.1 source code in order to attend this tutorial.

Language Construction Tools on the UNIX System

Steve Johnson, Ardent Computer Corp.

UNIX 4.X BSD Systems Administration

Rob Kolstad, Prisma Inc., & Evi Nemeth, University of Colorado

XToolkit Intrinsics

Chuck Price, Digital Equipment Corp.

Open Network Computing (ONC) and NFS[#]

Sally Ahnger, John Corbin & Christopher Silveri, Sun Microsystems, Inc.

UNIX Device Driver Design (4.2/4.3BSD)

Daniel Klein, Software Engineering Institute

You must be licensed for 4.2/3BSD source code, or licensed for either 32/V, System III or System V source code from AT&T in order to attend this tutorial.

MACH

Avadis Tevanian, Jr., Next, Inc.

Network Computing System and Architecture: Overview and Tutorial in Writing Distributed Applications[*]

Nathaniel Mishkin & Paul J. Leach, Apollo Computer, Inc.

Network Extensible Window System (NeWS)

Owen M. Densmore & David A. LaVallee, Sun Microsystems, Inc.

Object Oriented Design on UNIX: The Eiffel Approach[*]

Bertrand Meyer, Interactive Software Engineering, Inc.

[#] ONC and NFS are trademarks of Sun Microsystems, Inc.

[*] This is the first time the USENIX Association has offered this tutorial.

Conference Program

WEDNESDAY, FEBRUARY 1

Introduction and Keynote   Chair: Peter Salus   9:00-10:30

Keynote:
William T. O'Shea, Vice President – Product Development, AT&T

Break   10:30-11:00

RPC and Distributed Systems   Chair: Lori Grob   11:00-12:30

Experiences with PARPC
Bruce Martin, Hewlett-Packard
Charles Bergan & Walter Burkhard, University of California at San Diego
Jehan-Francois Paris, University of Houston

Dynamically synchronized locking – a lightweight locking protocol
for resource locking in a stateless environment
Peter Gloor & Rudolf Marty, University of Zurich

Adding UNIX Hosts to Distributed Operating System
Geoffrey Lee, Lawrence Livermore National Laboratory

Lunch   12:30- 2:00

File Systems   Chair: Melinda Shore   2:00- 3:30

The Automounter
Brent Calleghan & Tom Lyon, Sun Microsystems, Inc.

Improving the Performance and Correctness of an NFS Server
Chet Juszczak, Digital Equipment Corp.

RASH: A Rapid Access Storage Hierarchy
Robert Henderson, NASA Ames Research Center

Break   3:30- 4:00

Operating Systems I   Chair: Avadis Tevanian   4:00- 5:30

Multiprocessor Aspects of the DG/UX 4.00 Kernel
Michael Kelley, Data General Corp.

MOSIX: An Integrated UNIX for Multiprocessor Workstation
Amnon Barak & Richard Wheeler, Hebrew University of Jerusalem

Sema: a Lint-like tool for Analyzing Semaphore Usage
in a Multithreaded UNIX Kernel
Joe Korty, MODCOMP

THURSDAY, FEBRUARY 2

Window Systems	Chair: Jeff Schwabb	9:00-10:30

Visualizing X11 Clients
David Lemke & David Rosenthal, Sun Microsystems, Inc.

PEX: A 3D Extension to X Windows
Spencer Thomas & Martin Friedmann, University of Michigan

XVT: Virtual Toolkit for Portability Between Window Systems
Mark Rochkind, Advanced Programming Institute

Break	10:30-11:00

Special Interest I	Chair: Andrew Hume	11:00-12:30

Viral Attacks on UNIX System Security
Tom Duff, AT&T Bell Laboratories

A Faster *fsck* for BSD UNIX
Eric Bina & Perry Emrath, University of Illinois at Urbana-Champaign

Lessons of the New Oxford English Dictionary Project
Tim Bray, University of Waterloo

Lunch	12:30- 2:00

Internetworking	Chair: Tom Narten	2:00- 3:30

Implementation of Dial-up IP for UNIX Systems
Leo Lanzillo & Craig Partridge, BBN Systems and Technologies Corp.

A UNIX Implementaion of the Simple Network Management Protocol
Wengyik Yeongw, Marty Schoffstall & Mark Fedor, NYSERNet, Inc.

Limiting Factors in the Performance of Jacobson TCP Algorithms
Allison Mankin & Kevin Thompson, MITRE Corp.

Break	3:30- 4:00

Objects & Memory	Chair: Jim Lipkis	4:00- 5:30

The Shared Memory Server
Alessandro Forin, Joseph Barrera & Richard Sanzi,
Carnegie-Mellon University

Minimalist Physical Memory Control in UNIX
Mark Holderbaugh & Scott Preece, Gould, Inc.

Software Configuration Management with an Object-Oriented Database
Eric Black, Atherton Technology

Supporting Objects in a Conventional Operating System
Prasun Dewan, Purdue University

Work in Progress	Chair: Keith Bostic	4:00- 5:30

Ten minute presentations of current work

FRIDAY, FEBRUARY 3

Special Interest II   Chair: Donn Seeley   9:00- 10:30

A Comparison of Compiler Utilization of Instruction Set Architectures
  Daniel Klein, Software Engineering Institute

Discuss: An Electronic Conferencing System
for a Distributed Computing Environment
  Ken Raeburn, Jon Rochlis & Stan Zanarotti,
  Massachusetts Institute of Technology
  William Sommerfeld, Apollo Computer, Inc.

A Partial Tour Through the UNIX Shell
  Geoff Collyer, University of Toronto

Break   10:30-11:00

Operating Systems II   Chair: John Kepecs   11:00-12:30

Job and Process Recovery in a UNIX-based Operating System
  Brent Kingsbury & John Kline, Cray Research, Inc.

Session Management in System V Release 4
  Tim Williams, AT&T Bell Laboratories

The Modix Kernel
  Greg Snider & Jim Hayes, Hewlett-Packard

Lunch   12:30- 2:00

Processes   Chair: Jim McGinness   2:00- 3:30

Evolving the UNIX System Interface to Support Multithreaded Programs
  Paul McJones & Garret Swart, Digital Equipment Corp.

Variable Weight Processes With Flexible Shared Resources
  Ziya Aral, Ilya Gertner & Greg Schaffer, Encore Computer Group

System V/MLS Labeling and Mandatory Policy Alternatives
  Charles Flink & John Weiss, AT&T Bell Laboratories

Break   3:30- 4:00

Security   Chair: Rick Lindsley   4:00- 5:30

Secure Multi-level Windowing in a B1 Certifiable Secure UNIX
  Barbara Smith-Thomas, AT&T Bell Laboratories

Secure Window Systems
  Mark Carson, Wen-Der Jiang, Jeremy Liang,
  Gary Luckenbaugh, & Debra Yakov, IBM Corp.

A Trusted Network Architecture for AIX Systems
  Chii-Ren Tsai, Virgil Gligor, Wilhelm Burger, Mark Carson,
  Pau-Chen Cheng, Janet Cugini, Matthew Hecht, Shau-Ping Lo,
  Sohail Malik, & N. Vasudevan, IBM Corp.

Call for Papers

Workshop on Software Management

New Orleans Hilton and Towers
New Orleans, LA

April 3-4, 1989

David Tilbrook and Barry Shein will be chairing a workshop in New Orleans, LA on Monday and Tuesday, April 3-4, 1989. The workshop will concern the management and processing of source; the discipline of managing, maintaining, and distributing software. The ultimate objective of software management is unremarkable and painless installation of software and its subsequent upgrades at a remote site. The objective of the workshop is to present, discuss, and increase awareness of the issues involved with software management, in order to improve and facilitate the distribution and sharing of source throughout the UNIX community.

Release engineering
Configuration management
Installation tools and techniques
Construction tools and techniques
Source code control systems
Testing

The workshop will include full length papers, short presentations, and a panel discussion on tools (e.g., is PCTE a good or viable idea?).

Among the speakers already scheduled are: Vic Stenning (keynote), Steve Bourne, Andrew Hume, Kirk McKusick, and Evi Nemeth.

Abstracts of 350-700 words in PostScript or *troff* format should be submitted to *software@usenix*, by **January 25th, 1989**. Full papers will be required by **March 2nd, 1989**. Authors will be notified by **Febuary 6th, 1989** or at the San Diego Conference.

EUUG Spring '89 Conference

UNIX: European Challenges

Brussels, Belgium
April 3-7, 1989

The BUUG will host the Spring '89 European UNIX systems User Group Technical Conference in Brussels. Technical tutorials on UNIX and closely related subjects will be held on Monday and Tuesday, followed by the three day conference with commercial exhibitions. A pre-conference registration pack will be mailed to interested persons in early December.

If you wish to receive a personal copy of further information about this, and future EUUG events, please contact the Secretariat.

Secretariat	*Tutorial Officer*	*Programme Chair*
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Note Changed Dates!

Call for Papers

Workshop on UNIX Transaction Processing

Pittsburgh Hilton Hotel
Pittsburgh, PA

May 1-2, 1989

It is expected that the UNIX System will play an increasingly important role in hosting production transaction processing systems. This first transaction processing workshop will explore existing technology applicable to UNIX-based transaction processing, and hopefully generate technical discussion on future requirements. The intent is to have short papers and presentations which include (but are not limited to) the following topics:

Transaction Integrity
Two-Phase Commit
Distributed Transactions
Client-Server Transaction models
Transaction queing and scheduling
Data Entry Systems
Transaction Benchmarking
Transaction system performance modelling
Operating System Support for Transaction systems

The workshop will focus on short papers and presentations. Please send electronically or on paper a one to two page single-spaced summary describing your paper or presentation to Doug Kevorkian by **February 1, 1989**. All submissions will be acknowledged, and authors will be notified of acceptance by March 15, 1989.

For further details about the workshop, contact the program chair:

Doug Kevorkian
AT&T Bell Laboratories
Room 5-340
190 River Road
Summit, New Jersey 07901

(201) 522-5086 (voice)
(201) 522-6621 (FAX)
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Call for Papers
Summer 1989 USENIX Conference

Baltimore, Maryland
June 12-16, 1989

Papers in all areas of UNIX-related research and development are solicited for formal review for the technical program of the 1989 Summer USENIX Conference. Accepted papers will be presented during the three days of technical sessions at the conference and published in the conference proceedings. The technical program is considered the leading forum for the presentation of new developments in work related to or based on the UNIX operating system.

Appropriate topics for technical presentations include, but are not limited to:

Performance:
    Kernel enhancements
    Compute and file servers
    Scaling issues resulting from more MIPS
File systems: CD-ROM, WORM, network,
    archival
Networks: WAN, LAN, UUCP, OSI,
    distributed services
User interfaces
High reliability/availability, fault tolerance
Heterogeneous environments: mainframes
    DOS/UNIX migration
Media: graphics, video, audio, art, education
System/network administration and security
Trends:
    Lightweight processes
    Neural networks
    Object-oriented extensions

All submissions should describe new and interesting work. Like recent USENIX conferences, the Baltimore conference is requiring the submission of full papers rather than extended abstracts. The review and production cycle will not allow time for rewrite and re-review. (Time is, however, scheduled for authors of accepted papers to perform minor revisions.) Acceptance or rejection of a paper will be based solely on the work as submitted.

To be considered for the conference, a paper should include an abstract of 100 to 300 words, a discussion of how the reported results relate to other work, illustrative figures, and citations to relevant literature. The paper should present sufficient detail of the work plus appropriate background or references to enable the reviewers to perform a fair comparison with other work submitted for the conference. Full papers should be 8-12 single spaced typeset pages. All final papers must be submitted in a format suitable for camera-ready copy. For authors that do not have access to a suitable output device, facilities will be provided.

An abstract should be submitted as soon as possible. Full details and requirements will be supplied to prospective authors. Copies of the full manuscript should be submitted by ordinary and electronic mail to the Program Chair. Electronic submissions are recommended; *troff*-*ms* if possible.

Four copies and one electronic copy of each submitted paper should be received by **February 8, 1989**. Papers not received by this date will not be considered. Papers which clearly do not meet USENIX's standards for applicability, originality, completeness, or page length may be rejected without review. Acceptance notification will be made by March 13, 1989, and final camera-ready papers will be due by **April 7, 1989**.

Neil Groundwater
Baltimore USENIX Technical Program
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Abstracts, submissions, and questions:

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Book Reviews

Programming in ANSI C

by Stephen Kochan
(Prentice Hall, Inc.)

Reviewed by Ed Gronke

Sun Microsystems, Inc.

In the preface to this book, the author states that the reason behind this book is that he wishes to teach ANSI C without discussing features in the "older" C. Though I might dispute the utility of this, I think that he has achieved that goal.

I should make a note here that the aim of this book is for the novice programmer learning C as a first or second computer language with little programming experience. I tried to review the book from the standpoint of just such a programmer.

The organization of the book is well thought out and all of the standard topics (variable declaration and use, expressions, loop construction, conditional expressions and their use in conditional execution) are well covered. There are many program examples and clear and concise explanations.

One chapter of particular note is the chapter on pointers. The author works into the concept of pointers naturally from the previous chapter on character strings and mixes text with simple figures to get the message across.

Also of note is the general discussion of programming style throughout the book. At strategic points, the various possibilities are discussed and recommendations made. For example, the placement of braces (forever a religious war) is discussed at the first program example. Also, within the discussion of macro expansion, the placement of parentheses in the definition of a macro define with arguments is well presented.

Another section of the book which is essential for novice programmers is an appendix entitled **Common Programming Mistakes**. It covers a number of common programming mistakes in C, such as the unwanted semicolon, the uninitialized pointer, and the **&** (address of) operator in scanf calls, to name a few.

This is not to say that I was totally pleased with the book either. Though I could applaud the aims and the wishes of the author, I do disagree with the fact that the only place that the current status of ANSI C (i.e., in draft form) is mentioned is in the preface. It gives the false impression to the reader that the dialect of C described is well established and readily available.

Another complaint that I have with the book is its length. Although I have heard many complaints from people about the terseness of the other standard text for learning the language, I find that this book goes to the other extreme. Though I found some of the chapters concise and terse, others, such as the chapter on conditional expressions and executions, are overly wordy.

Also, the overall description of declaration of variables, with respect to type and scope, was disjointed. The scope of variables was discussed in the chapter dealing with functions while the various types were discussed in a separate chapter. I feel that there should have been one place in the book where, as a reference, the reader could find out the complete description on how to declare variables.

This leads to the general lack of a good summary in the book. Only the first appendix makes an attempt at this, though it has the same problem with length as some of the rest of the book.

A list of all the program examples would have also been helpful, so that someone attempting to browse through the book by trying the examples could do it easily. (Many people learn by doing, not by reading.)

Finally, I found the index of the book totally inadequate. Especially in a book of this length, I would expect to be able to use the index to browse through specific topics and find related topics. Though I found no glaring

absences from the entries, I found a number of missing references within the entries and few cross-references.

But, barring these problems, I felt that the book was a reasonable treatment of the material for novice programmers, assuming they have access to an ANSI C compiler.

Operating Systems: Communicating with and Controlling the Computer

by Laurie S. Keller
(London: Prentice Hall Ltd.) 370 pp.

Reviewed by Marc D. Donner

IBM T. J. Watson Research Center
donner@IBM.com

The concept behind this book has some things to recommend it, but the execution is so inadequate as to render the result completely useless. The book seems to be intended to be used to educate technically naive people about operating systems, with a heavy emphasis on examples drawn from currently significant commercial systems and light emphasis on concepts. The coverage is so spotty and so thin, however, that nothing of note is really learnable from the book.

The book starts off with a thumbnail sketch of computers and operating systems, focusing primarily on management of cpu time and of memory and on multiprocessors. It isn't clear why these three topics were picked or why only a total of six pages in two different chapters were devoted to questions of nonvolatile storage, file systems, and naming.

The bulk of the book is a series of case studies, in which seven different operating systems are examined in faint detail and contrasted with one another. The seven systems selected are: CP/M, MS-DOS, the p-System, UNIX, TPF/II, VM/SP, and MVS. The treatments of MS-DOS, UNIX, and VM/SP, with all of which I have substantial experience, are superficial and, worse yet, wrong-headed. My experience with the other four is sufficiently limited to make it difficult for me to evaluate those case studies.

For a specific example, the chapter on UNIX goes into considerable detail about the hierarchical name space of the UNIX file system, but mentions only in passing the UNIX file model and doesn't consider any of the implications of the file model. As a consequence the entire treatment is unfocused and ad hoc.

The figures in the book generally contain more flash than actual content, reinforcing the inference that the intended audience is managers and marketeers who need to be fluent in the buzzwords and don't really need any real grasp of the technical content. The quality of the writing is abysmal. The abuse of *which* is inexcusable, even in a book produced in the UK. The author seems to have a strong affinity for having successive verbs alternate between present and past tenses, something that produces affects ranging from discomfort to confusion in the reader.

This book may be of some value to some community of readers, but to the technically astute USENIX community it is completely worthless.

Summary of the Board of Directors Meeting

17-18 October 1988

Attendance: Stephen C. Johnson, Rob Kolstad, M. Kirk McKusick, Sharon Murrel, Mike O'Dell, Alan G. Nemeth, John S. Quarterman, Deborah K. Scherrer, Rick Adams, Judy DesHarnais, John Donnelly, Donnalyn Frey, Lou Katz, Evi Nemeth, Peter H. Salus, Ellie Young.

Elections

McKusick reported on the activities of the committee which has been looking into possible by-law changes for future elections (McKusick, L. Katz, L. Law, J. Lepreau, M. Tilson, D. Yost). He reported that the committee's recommendations were far from unanimous. The suggested changes were in four areas: 1. Electing the officers; 2. Length of board service; 3. Nomination signatures; and 4. When new members vote.

There was a good deal of discussion about #1. Currently, the officers are elected separately and the at-large members preferentially. An alternative would be for all eight Board members to be elected at-large and for the Board to select its officers. Another format might be for the President to be elected separately, and the other officers to be chosen from among the seven Board members elected "at-large." This last was moved and failed, only McKusick and Quarterman voting affirmatively.

The second point, how long individuals should be allowed to remain on the Board, was also discussed at length. It was moved that Board members be limited to four consecutive terms. This motion also failed (McKusick, Murrel, O'Dell, Quarterman for; Johnson, Kolstad, Nemeth opposed; Scherrer abstaining).

The motions on the last two points never came to a vote.

FaceSaver

Katz reported that about 1000 faces had been collected in San Francisco, and that there were just about 3000 faces in the database in toto. The Board expressed their unhappiness that a larger number of attendees had not participated. It was decided that the FaceSaver be discontinued as a conference project. Katz (and Yost, who had participated in the original effort in Phoenix) were thanked. Katz is currently involved in an effort at making the database accessible via UUNET.

Online Papers

Scherrer and several others spoke about the members' interest in there being an online index to the conference and workshop papers and to putting at least some of the conference papers online. Scherrer made a proposal that the Association fund a project for this purpose, which was passed unanimously.

Student Assistance

Evi Nemeth proposed a greater degree of formalization in the assistance her students give the Association both before and during conferences. Her proposals were enthusiastically received and the Colorado students will work for the Association at San Diego, Baltimore, and Washington. Their contribution will be reassessed in a year.

Chapters

Recent net correspondence concerning chapters was discussed. The result was a decision not to encourage formal chapters.

GNU

The Board declined to fund GNU projects, though it decided to permit Salus to periodically print announcements in ;login and to allow Donnelly to consider offering a GNU tutorial.

Women's BoF

Lori Grob had delivered a lengthy report on the Women in Computing BoF held in San Francisco. It contained a number of suggestions for future meetings, many of them

addressing concerns of the membership as a whole.

It was decided to implement a number of the suggestions in San Diego, among these:

- a social function on Sunday
- a USENIX lounge
- box lunches at tutorials
- a session on writing abstracts and papers.

Future Workshops

It was decided to hold workshops on Transaction Processing and Software Management in the spring of 1989 and on Distributed Systems and Computer Graphics in the fall. The Board is eager to entertain other topics or proposals.

Dues

It was decided to hold the membership fees at the current rates.

UUNET

There was a lengthy discussion of the legal status of UUNET, of its incorporation, and of the Association's liability, as the new corporation's parent and largest creditor. Documents are being drafted to guarantee the eventual repayment of the Association's investment, which will then be used for other projects.

– PHS

Workshops

The Board of Directors over the past few years has sponsored more conferences and workshops than previously. In 1984, 1985, and 1986 there were Graphics I, II, and III in Monterey, for example. In 1987, the Association sponsored workshops on Large Systems Administration (Philadelphia), Computer Graphics (Cambridge), POSIX (Berkeley), and C++ (Santa Fe).

This year, there was a cooperative workshop on Real-Time Systems (with the IEEE), a Security Workshop (Portland, OR), a Supercomputing Workshop (Pittsburgh), a second Large Systems Administration Workshop (Monterey), and a C++ mini-Conference (Denver).

While a few of the papers of the 1984 Graphics Workshop were published in *;login:*, nearly all the ensuing workshops have published either Abstracts or Proceedings.

The Association is eager to sponsor small and medium-sized workshops in technical areas, and welcomes suggestions as to subject matter from the membership. Volunteers to chair and/or organize the workshops are always needed.

Please write the Executive Director, Peter H. Salus at the Association Office, PO Box 2299, Berkeley, CA 94710; or email *uunet!peter* or *ucbvax!usenix!peter*.

Long-Term Calendar of UNIX Events[†]

1988 Dec 5-7	Sun User Group	Fontainebleau Hilton, Miami Beach, FL
1988 Dec 7-8	UNIX Fair '88	JUS; Tokyo, Japan
1988 Dec 12-16	ANSI X3J11	Seattle, WA
1988 Dec 13-15	System V.4 Software Dev.	AT&T and Sun; Washington, DC
1989 Jan 9-13	IEEE 1003	Embassy Suites, Ft. Lauderdale, FL
1989 Jan 17	Terminal Int. Ext. and Net. Serv.	NIST; MD
1989 Jan 30-Feb 3	USENIX	Town and Country, San Diego, CA
1989 Feb	UNIX in Government	Ottawa, Ont.
1989 Feb 28-Mar 3	UNIX Convention	AFUU; Paris, France
1989 Feb 28-Mar 3	UniForum	Moscone Center, San Francisco, CA
1989 Apr 3-4	*Software Management Workshop	New Orleans Hilton, New Orleans, LA
1989 Apr 3-7	EUUG	Palais des Congres, Brussels, Belgium
1989 Apr 10-11	ANSI X3J11	Phoenix, AZ
1989 Apr 24-28	IEEE 1003	Minneapolis-St. Paul, MN
1989 May 1-2	*Transaction Processing Workshop	Pittsburgh Hilton, Pittsburgh, PA
1989 May 8-12	DECUS	Atlanta, GA
1989 May 14-16	AMIX	Israel
1989 May 16	POSIX Application Workshop	NIST; MD
1989 May	UNIX 8x/etc	/usr/group/cdn; Toronto, Ont.
1989 Jun	NZSUGI	New Zealand
1989 Jun 12-16	USENIX	Hyatt Regency, Baltimore, MD
1989 Jul	JUS 13	Toyko, Japan
1989 Jul 10-14	IEEE 1003	San Francisco, CA
1989 Sep 18-22	EUUG	Vienna, Austria
1989 Oct 5-6	*Distributed Systems Workshop	Marriott Marina, Ft. Lauderdale, FL
1989 Oct 16-20	IEEE 1003	Brussels (or Amsterdam)?
1989 Nov 1-3	UNIX Expo	New York, NY
1989 Nov 6-10	DECUS	Anaheim, CA
1989 Nov/Dec	*Graphics Workshop V	?
1989 Nov	JUS 14	Osaka or Kobe, Japan
1989 Dec	JUS UNIX Fair	Toyko, Japan
1990 Jan 22-26	USENIX	Omni Shoreham, Washington, DC
1990 Jan 23-26	UniForum	Washington Hilton, Washington, DC
1990 Jan 29	IEEE 1003	New Orleans, LA
1990 Feb	UNIX in Government	Ottawa, Ont.
1990 Apr	IEEE 1003	Montreal, Que.
1990 Apr 23-27	EUUG	Munich, Germany (tentative)
1990 May 7-11	DECUS	New Orleans, LA
1990 May	UNIX 8x/etc	/usr/group/cdn; Toronto, Ont.
1990 Jun 11-15	USENIX	Marriott Hotel, Anaheim, CA
1990 Autumn	EUUG	south of France
1991 Jan 21-25	USENIX	Grand Kempinski, Dallas, TX
1991 Jan 22-25	UniForum	Infomart, Dallas, TX
1991 Jun 10-14	USENIX	Opryland, Nashville, TN

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† Partly plagiarized from John S. Quarterman by PHS.

* USENIX Workshops

Future Events

USENIX 1989 Winter Technical Conference
San Diego, Jan. 30-Feb. 3, 1989
See page 3.

Workshop on Software Management
New Orleans, Apr. 3-4, 1989
See page 8.

EUUG Spring Conference
Brussels, Apr. 3-7, 1989
See page 9.

Workshop on UNIX Transaction
Processing, Pittsburgh, May 1-2, 1989
See page 10.

USENIX 1989 Summer Conference and
Exhibition, Baltimore, Jun. 12-16, 1989
See page 11.

Distributed Processing Workshop
Fort Lauderdale, Oct., 5-6, 1989

Graphics Workshop V, Nov. or Dec. 1989

Long-term USENIX & EUUG Schedule
Sep 18-22 '89 Vienna, Austria
Jan 22-26 '90 Omni Shoreham, Washington, DC
Apr 23-27 '90 Munich, W. Germany
Jun 11-15 '90 Marriott Hotel, Anaheim
Jan 21-25 '91 Grand Kempinski, Dallas
Jun 10-14 '91 Opryland, Nashville
Jan 20-24 '92 Hilton Square, San Francisco
Jun 8-12 '92 Marriott, San Antonio

UNIX Calendar

John Quarterman, of TIC, and Alain Williams, of EUUG, are planning to compile a calendar of world-wide UNIX events. If you have an event you wish to publicize on this calendar, contact John Quarterman at *jsq@longway.tic.com* or at *uunet!longway!jsq*.

2.10BSD Software Release

The "Second Berkeley Software Distribution" (2.10BSD), produced by the Computer Systems Research Group (CSRG) of the University of California, Berkeley, is being distributed by the USENIX Association. It is available to all V7, System III, System V, and 2.9BSD licensees for a price of $200. The release consists of two 2400 foot, 1600 BPI tapes (approximately 80Mb) and approximately 100 pages of documentation. If you require 800 BPI tapes, please contact USENIX for more information.

Sites wishing to run 2.10BSD should be aware that the networking is only lightly tested, and that certain hardware has yet to be ported. Contact Keith Bostic at the address below for current information as to the status of the networking. As of August 6, 1987, the complete 4.3BSD networking is in place and running, albeit with minor problems. The holdup is that only the Interlan Ethernet driver has been ported, as well as some major space constraints. Note, if we decide to go to a supervisor space networking, 2.10 networking will only run on:

> 11/44/53/70/73/83/84
> 11/45/50/55 with 18 bit addressing

If you have questions about the distribution of the release, please contact USENIX at:

> 2.10BSD
> USENIX Association
> PO Box 2299
> Berkeley, CA 94710
>
> +1 415 528-8649
> {uunet,ucbvax}!usenix!office

If you have technical questions about the release, please contact Keith Bostic at:

> {ucbvax,seismo}!keith
> keith@okeeffe.berkeley.edu
>
> +1 415 642-4948

Keith Bostic
Casey Leedom

NOTE: There are a few copies of 2.9BSD available. If you do not have split I&D and want to run UNIX on your PDP-11/x, write the USENIX office.

– PHS

Publications Available

The following publications are available from the Association Office. Prices and overseas postage charges are per copy. California residents please add applicable sales tax. Payment **must** be enclosed with the order and **must** be in US dollars payable on a US bank.

The EUUG Newsletter, which is published four times a year, is available for $4 per copy or $16 for a full-year subscription.

We hope to have EUUG tapes and conference proceedings available shortly.

Conference and Workshop Proceedings

Meeting	Location	Date	Price	Overseas Air
Large Installation Systems Admin. Workshop	Monterey	Nov. '88	$ 8	$ 7
C++ Conference	Denver	Oct. '88	20	20
UNIX and Supercomputers Workshop	Pittsburgh	Sep. '88	20	15
UNIX Security Workshop	Portland	Aug. '88	5	7
USENIX Conference	San Francisco	Jun. '88	20	20
C++ Workshop	Santa Fe	Nov. '87	20	20
Graphics Workshop IV	Cambridge	Oct. '87	10	15
USENIX Conference	Washington DC	Jan. '87	10	20
Graphics Workshop III	Monterey	Dec. '86	10	15

EUUG Proceedings for Spring 1988 (London) and Fall 1988 (Portugal) are available in limited numbers to North American customers at $40 per copy.

C++ Tape

The first 1988 USENIX software tape contains C++ software. It requires no AT&T nor UC license. It has been sent to all current Institutional and Supporting members of the Association.

Individual members of USENIX who wish to obtain a copy of the tape may request it from the Association Office, which will then send the requestor a "Tape Release Form." The form plus a check for $125 should be returned to the office, whereupon the tape will be sent out, postpaid in the US. Foreign individuals will be billed for the additional (air) postage/shipping.

The tape, in *tar* format at 1600 BPI, contains:

GNU C++ Version 1.21.0 (Michael Tiemann)
OOPS (Keith E. Gorlen)
Storage management class and String class... (Peter A. Buhr)
InterViews 2.3 (Mark A. Linton)
C++ Subroutines for string manipulation (Arthur Zemon)

The tape is not available to non-members of the USENIX Association.

NOTICE: Some copies of the C++ tape are faulty. If you cannot read your tape, return it to the USENIX Office.

4.3BSD Manuals

The USENIX Association now offers all members of the Association the opportunity to purchase 4.3BSD manuals.[†]

The 4.3BSD manual sets are significantly different from the 4.2BSD edition. Changes include many additional documents, better quality of reproductions, as well as a new and extensive index. All manuals are printed in a photo-reduced 6″×9″ format with individually colored and labeled plastic "GBC" bindings. All documents and manual pages have been freshly typeset and all manuals have "bleed tabs" and page headers and numbers to aid in the location of individual documents and manual sections.

A new Master Index has been created. It contains cross-references to all documents and manual pages contained within the other six volumes. The index was prepared with the aid of an "intelligent" automated indexing program from Thinking Machines Corp. along with considerable human intervention from

Mark Seiden. Key words, phrases and concepts are referenced by abbreviated document name and page number.

While two of the manual sets contain three separate volumes, you may only order complete sets.

The costs shown below do not include applicable taxes or handling and shipping from the publisher in New Jersey, which will depend on the quantity ordered and the distance shipped. Those charges will be billed by the publisher (Howard Press).

Manuals are available now. To order, return a completed "4.3BSD Manual Reproduction Authorization and Order Form" to the USENIX office along with a check or purchase order for the cost of the manuals. You **must** be a USENIX Association member. Checks and purchase orders should be made out to "Howard Press." The manuals will be shipped to you directly by the publisher.

Manual	Cost*

User's Manual Set (3 volumes)
    User's Reference Manual
    User's Supplementary Documents
    Master Index
	$25.00/set

Programmer's Manual Set (3 volumes)
    Programmer's Reference Manual
    Programmer's Supplementary Documents, Volume 1
    Programmer's Supplementary Documents, Volume 2
	$25.00/set

System Manager's Manual (1 volume)	$10.00

* Not including postage and handling or applicable taxes.

4.2BSD Manuals are No Longer Available

[†] Tom Ferrin of the University of California at San Francisco, a former member of the Board of Directors of the USENIX Association, has overseen the production of the 4.2 and 4.3BSD manuals.

4.3BSD Manual Reproduction Authorization and Order Form

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Local User Groups

The USENIX Association will support local user groups by doing an initial mailing to assist the formation of a new group and publishing information on local groups in *;login:*. At least one member of the group must be a current member of the Association.

CA – Fresno: the Central California UNIX Users Group consists of a *uucp*-based electronic mailing list to which members may post questions or information. For connection information:

Educational and governmental institutions:

Brent Auernheimer   (209) 294-4373
brent@CSUFresno.edu or csufres!brent

Commercial institutions or individuals:

Gordon Crumal   (209) 875-8755
csufres!gordon   (209) 298-8393

CA – Los Angeles: the Los Angeles UNIX Group meets on the 3rd Thursday of each month in Redondo Beach.

Drew Bullard   (213) 535-1980
ucbvax!trwrb!bullard

Marc Ries   (213) 535-1980
{decvax,sdcrdcf}!trwrb!ries

CO – Boulder: the Front Range UNIX Users Group meets monthly at different sites.

Steve Gaede   (303) 938-2985
NBI, Inc.
P.O. Box 9001
Boulder, CO 80301

{boulder,hao}!nbires!gaede

FL – Coral Springs:

S. Shaw McQuinn   (305) 344-8686
8557 W. Sample Road
Coral Springs, FL 33065

FL – Melbourne: the Space Coast UNIX Users Group meets at 8pm on the 3rd Wednesday of each month at the Florida Institute of Technology.

Bill Davis   (407) 242-4449
bill@ccd.harris.com

FL – Orlando: the Central Florida UNIX Users Group meets the 3rd Thursday of each month.

Mike Geldner   (305) 862-0949
codas!sunfla!mike

Ben Goldfarb   (305) 275-2790
goldfarb@hcx9.ucf.edu

Mikel Manitius   (305) 869-2462
{codas,attmail}!mikel

FL – Tampa Bay: the Tampa UNIX Users Group meets the 1st Thursday of each month, alternately in Largo and Tampa.

Scott Stone   (813) 974-3307
uflorida!usfvax2!stone, stone@usf.edu

Bill Hargen   (813) 530-8655
{codas,usfvax2}!pdn!hargen

George W. Leach   (813) 530-2376
uunet!pdn!reggie

GA – Atlanta: meets on the 1st Monday of each month in White Hall, Emory University.

Atlanta UNIX Users Group
P.O. Box 12241
Atlanta, GA 30355-2241

Marc Merlin   (404) 442-4772
Mark Landry   (404) 365-8108

MI – Detroit/Ann Arbor: meets the 2nd Thursday of each month in Ann Arbor.

William Bulley   (313) 995-6211
web@applga.uucp

Rich McGill   (313) 971-5950
rich@oxtrap.uucp

Steve Simmons   (313) 426-8981
scs@lokkur.uucp

MI – Detroit/Ann Arbor: dinner meetings the 1st Wednesday of each month.

Linda Mason   (313) 855-4220
michigan!/usr/group
P.O. Box 189602
Farmington Hills, MI 48018-9602

MN – Minnetonka: meets the 1st Wednesday of each month.

UNIX Users of Minnesota
545 Ashland Avenue #3
St. Paul, MN 55102

Scott Anderson   (612) 688-0089
scott@questar.mn.org

MO – St. Louis:

St. Louis UNIX Users Group
Plus Five Computer Services
765 Westwood, 10A
Clayton, MO 63105

Eric Kiebler   (314) 725-9492
plus5!sluug

NE – Omaha: meets on the 2nd Thursday of each month.

/usr/group nebraska
P.O. Box 44112
Omaha, NE 68144

Kent Landfield   (402) 291-8300
kent@ugn.uucp

New England – Northern: meets monthly at different sites.

Emily Bryant   (603) 646-2999
Kiewit Computation Center
Dartmouth College
Hanover, NH 03755

David Marston   (603) 883-3556
Daniel Webster College
University Drive
Nashua, NH 03063

decvax!dartvax!nneuug-contact

NJ – Princeton: the Princeton UNIX Users Group meets monthly.

Pat Parseghian   (609) 452-6261
Dept. of Computer Science
Princeton University
Princeton, NJ 08544

pep@Princeton.EDU

NY – New York City:

Unigroup of New York
G.P.O. Box 1931
New York, NY 10116

Ed Taylor   (212) 513-7777
{attunix,philabs}!pencom!taylor

New Zealand:

New Zealand UNIX Systems User Group
P.O. Box 13056
University of Waikato
Hamilton, New Zealand

OK – Tulsa:

Pete Rourke
$USR
7340 East 25th Place
Tulsa, OK 74129

PA – Philadelphia: the UNIX SIG of the Philadelphia Area Computer Society (PACS) meets the morning of the 3rd Saturday of each month at the Holroyd Science Building, LaSalle University.

G. Baun, UNIX SIG
c/o PACS
Box 312
La Salle University
Philadelphia, PA 19141

rutgers!{bpa,cbmvax}!
    temvax!pacsbb!{gbaun,whutchi}

TX – Dallas/Fort Worth:

Dallas/Fort Worth UNIX Users Group
Seny Systems, Inc.
5327 N. Central, #320
Dallas, TX 75205

Jim Hummel   (214) 522-2324

TX – San Antonio: the San Antonio UNIX Users (SATUU) meets the 3rd Thursday of each month.

Jeff Mason   (512) 494-9336
Hewlett Packard
14100 San Pedro
San Antonio, TX 78232

gatech!petro!hpsatb!jeff

WA – Seattle: meets monthly.

Bill Campbell   (206) 232-4164
Seattle UNIX Group Membership Information
6641 East Mercer Way
Mercer Island, WA 98040

uw-beaver!tikal!camco!bill

Washington, D.C.: meets the 1st Tuesday of each month.

Washington Area UNIX Users Group
2070 Chain Bridge Road, Suite 333
Vienna, VA 22180

Samuel Samalin   (703) 448-1908

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Long-Range Calendar of UNIX Events

Summary of Board Meeting

Change of Address Form

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